

I encourage the FCC to be very, very cautious indeed about allowing deployment of BPL technology in the United States, on even an experimental basis. The risk of interference with licensed radio services seems high, and will be both difficult and expensive to mitigate.

There is a valuable lesson to be learned from recent history. A few years ago, the FCC issued waivers to Fleet Call, allowing this company to begin operating a digital data service in a portion of the 800 MHz spectrum close to frequencies allocated to numerous public-safety licensees. There was serious concern expressed at the time that the digital transmissions would cause harmful interference to the public-safety operations, due to causes such as intermodulation and receiver desensing. The FCC allowed Fleet Call to operate, on the condition that no harmful interference be allowed to occur, and (if such did occur) that Fleet Call would be responsible for mitigating the problem.

The results have, by all accounts, been very bad. There have been numerous reports of interference caused by the Nextel cellular phone systems being operated under the terms of these waivers. Police and fire officials have been put in danger of their lives when their radio systems failed to work properly. Attempts by Nextel to mitigate the problems have been less than satisfactory.

The FCC is now faced with serious and difficult decisions about the need to re-band the 800 MHz spectrum, move Nextel's operations to different frequencies, and/or shut down Nextel's operations for noncompliance with the terms of the waivers. No matter what decision is made, it's very likely that the FCC's decision will be challenged in court by one or another interested party. The cost to the public, to public-safety organizations, and to businesses affected in one way or another by the 800 MHz interference problem is certain to run into billions of dollars.

800 MHz interdigital operation was opposed by existing users of the spectrum in question, on the grounds that the technology was very likely to cause interference. The companies backing the 800 MHz interdigital operation argued that interference was not likely to occur, and could be mitigated if it did occur. In the end, interference did occur, and attempts at mitigation were far from successful... the opponents were right, and the proponents failed to honor their promises. Quite simply, the FCC made a "business friendly" decision, failed to enforce its primary mandate to protect the spectrum from interference, and the results have been most unfortunate.

I fear that the FCC is about to allow history to repeat itself, and that licensed spectrum users will be the losers.

BPL is a flawed technology. It cannot help but interfere with licensed radio services. Its supporters argue that it can create an economical "broadband nirvana" for rural users not served by DSL or cablemodem systems, yet an examination of its actual economics-of-scale do not appear to support this. Newer technologies such as 802.11 WiFi (for local links) and WiMax (for neighborhood and longer-distance links) offer better ways to deliver bandwidth to rural users, and operate in portions of the spectrum where interference with licensed users should be much less common.

The FCC should (and, I believe, must) enforce its "no harmful interference" rules strictly and to the letter, and should not relax the Part 15 rules in any way.